

DCT-4 common baseband

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radiohead
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FMANT
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XAUDIO(17:0)
GENIO(31:0)
Components: 6100-6199

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GENIO(31:0)
Components: 1470-1499

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Components: 2400-2599

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gnd
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IRGND

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ueme_discrete
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IRIF_I(1:0)
POWER Components: 2200-2399
PWR_FILTER Components:2330-2349
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IR
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IRIF(2:0)
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SIM
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basic8m
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Components: 2800-2899

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combo128+8mbit
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Components: 3000-3079

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gsm_iset
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RFCLK_I
RFICCTRL(2:0)
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Components: 2900-2999

RF
schematic
RXINP
RXINN
RXQINP
RXQINN
TXIOUTP
TXIOUTN
TXQOUTP
TXQOUTN
VREF02
VREF01
TXP
RESET
TXA
MODE
RFBUSCLK
RFBUSDA
RFBUSEN1
RFCLK_I
PA_IDENT
PATEMP
RXI
RXQ
TXIP
TXIM
TXQP
TXQM
VrefRF02
VrefRF01
TXC
AFC
TXP
Reset
TXA
Mode
RFBusClk
RFBusData
RFBusEna1
VCTCXO
PA_IDENT
RFTEMP
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VBAT
IPA1
IPA2
VR1
VR2
VR3
VR4
VR5
VR6
VR7

System connector, audio

2mm DC converter

Pop-Port System Connector

Charge
Charge GND
Charge
Shielding GND
Charge GND
ACI
Vout
USB Vbus
Fbus_RX / USB D+
Fbus_Tx / USB D-
Data GND
XMICN
XMICP
XEARN
XEARP
XEARRN
XEARRP
Shielding GND

Internal microphone
active = 1.7V
inactive = 0V

Microphone

IHF speaker

UEME

2.8V

2.8V

UEME

External microphone
active = 2.1V
inactive = 2.8V

UEME

FM radio



UEME, SIM

System connector
UEME
~4V
UI
2.8V
2.8V if accessory connected
1.35V
1.8V
2.8V
32.768kHz
2.8V
2.8V
System connector
Hall switch
System connector
~4V
2.8V
1.8V
UPP, UI, FM radio
UI
VSIM = 1.8V/3V
SIM connector
System connector
UPP
2.8V
~4V
2.8V
Battery connector
RF part
VREFRF01=1.35V
4.75V
not needed
2.8V
RF part
2.8V
RF part

PA_IDENT
R7700
OR
PA identification

	PA	R7000
EU BOM1	RENESAS PF09015B	0R0
EU BOM1A	AGILENT QCPM8895	100K
US BOM1	RENESAS PF09015B	0R0
US BOM1A	AGILENT QCPM8895	100K

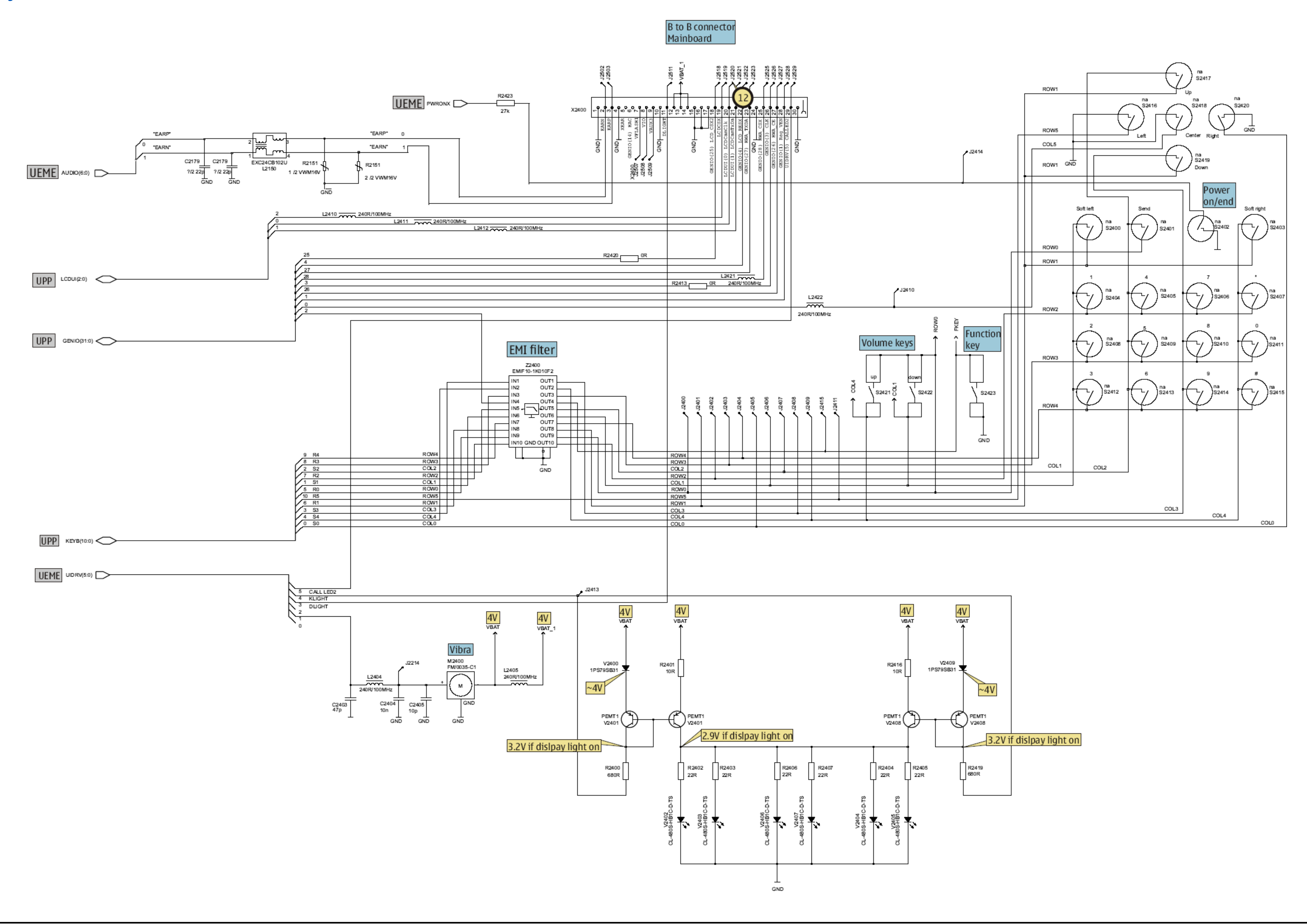
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UPP, combo memory

FM radio

FM radio
N6156
TEA5761UK_N3D
2.8V VANA
1.8V VIO
GND
UPP AUDUEMCTRL(3:0)
CBUSDA
CBUSCLK
CBUSENX_IN
UEME PUSL(3:0)
SLEEPCLK
System connector FMANT
C6176 100p
C6178 27p
L6176 120nH
C6179 47p
C6170 10n
UPP GENIO(31:0)
J6153
J6152
DGND VDD DATA CLOCK BUSENABLE BUSMODE VREFDIG CBUSenX SWPORT FREQIN XTAL RFIN1 RFIN2 RFGND CAGC INTX
CPOUT LOOPSW LO1 LO2 VAFR VAFL TMUTE MPXOUT DGND CD1 CD2 CD3 INTCON1 INTCON2 AGND VCC
L6156 47nH
C6165 33n
C6163 33n
C6159 33n
C6158 100n
R6159 10k
R6160 100k
C6157 10n
C6162 33n
C6180 100n
C6182 100n
C6184 100n
C6185 100n
R6180 1k0
R6181 1k0
R6182 1k0
R6183 1k0
MIC3P
MIC3PR
MIC3N
MIC3NR
XAUDIO(17:0) UEME

UI, vibra, keyboard





Flip part, displays, camera

Board to board connector

Main Display

LCD connector

Front Display

LCD connector

HW Accelerator

Camera connector

DC/DC converter

Camera regulator

HAC coil

Speaker

Note: No repairs allowed on “Flip board”!



RF part

VANT_2 VC1 [Volt]	VANT_3 VC2 [Volt]	VANT_1 VC3 [Volt]	RX 1 GSM900 RX	RX 2 GSM1800 RX	RX 3 GSM1900 RX	TX 1 GSM900 TX	TX 2 GSM1800/1900 TX
0	0	0	X				
0	0	0		X			
0	2.6	2.6				X	
0	2.6	0			X		
2.6	2.6	0					X

1) see table

	Z7803
EU BOM1 EU BOM1A	Epcos B9017
US BOM1 US BOM1A	Epcos B9004

3) see table

	N7700	Z7700	L7702	R7701	R7702	R7712 C7712	R7713	R7715	R7716 C7716	C7177	C7703	C7704	C7708	C7709	C7722	C7723
EU BOM1	Renesas PF09015B CUT8.9	FMD B29J V3.1	22n	na	4k7	1k0	100	100	1k0	47p	10n	10n	270p	10n	100n	na
EU BOM1A	Agilent QCPM8895 VER 8.0	FMD B29J V3.1	22n	1k	8k2	10n	33	33	10n	na	56p	1p	2p2	na	10n	3p3
US BOM1	Renesas PF09015B CUT8.9	FMD B29L V3.1	18n	na	4k7	1k0	100	100	1k0	47p	10n	10n	270p	10n	100n	na
US BOM1A	Agilent QCPM8895 VER 8.0	FMD B29L V3.1	33n	1k	8k2	10n	33	33	10n	na	56p	1p	2p2	na	10n	3p3

Band	Channel	RX	VCO	VC
GSM 850	190	881,6MHz	3526.4MHz	
GSM 900	37	942.4MHz	3769.6MHz	~1.33V
GSM 1800	700	1842.8MHz	3685.6MHz	~0.98V
GSM 1900	661	1960MHz	3920MHz	~1.93V

Antenna switch

Power amplifier

RF IC

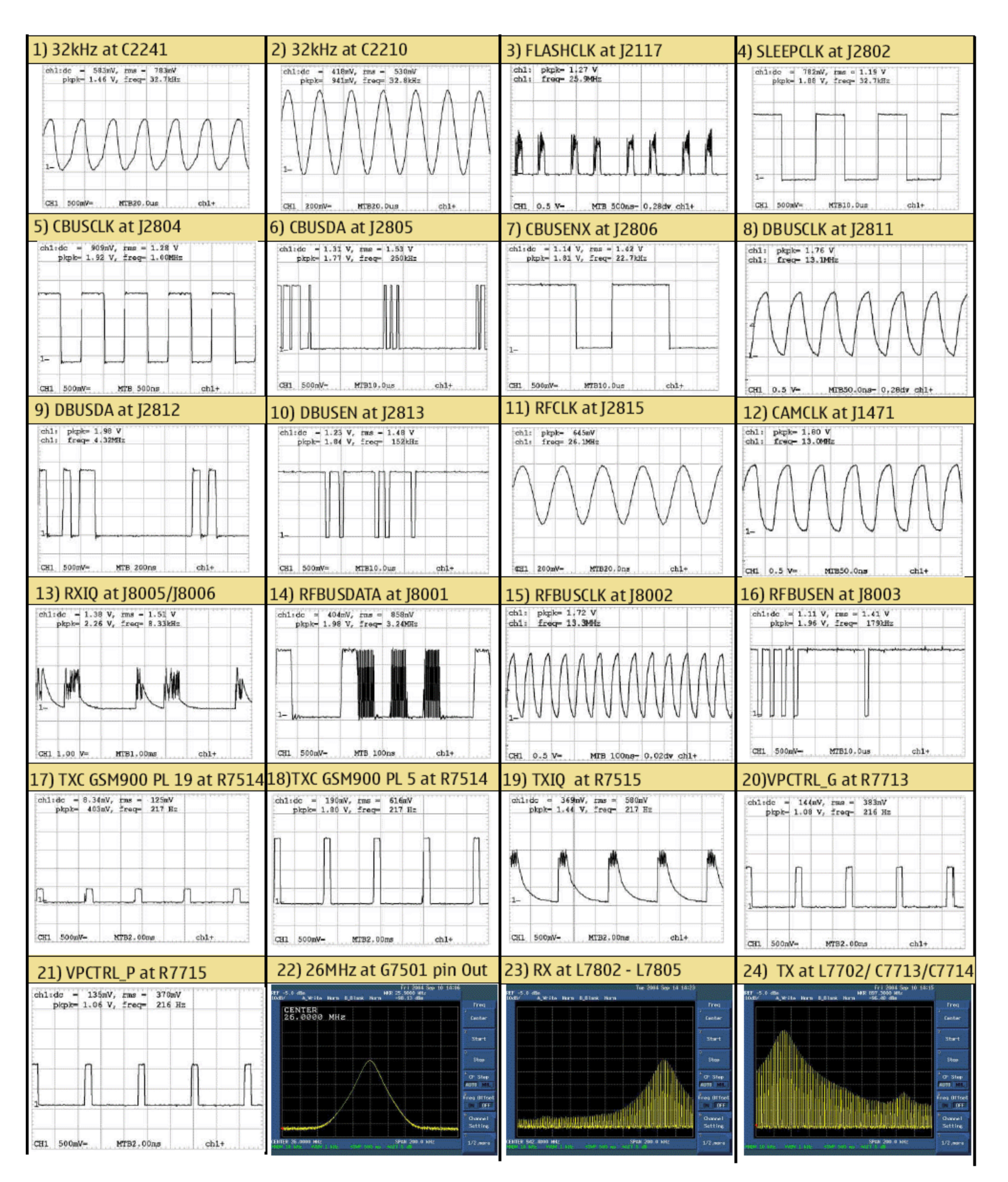
2) see table

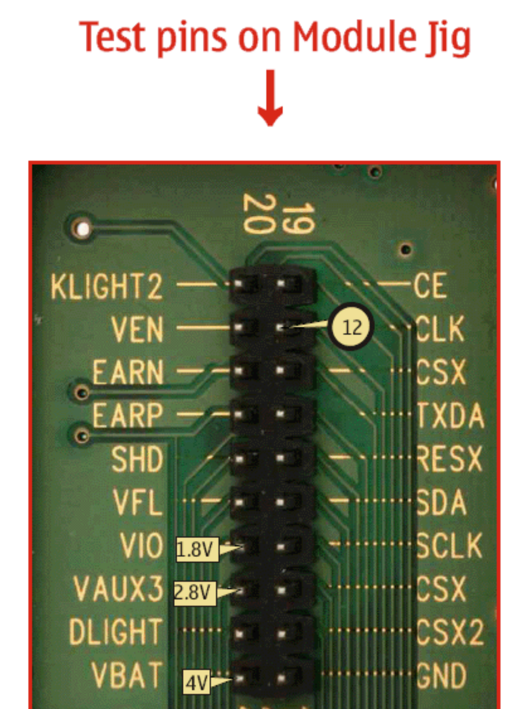
	C7511	R7504	R7505	R7506	R7508	C7506	C7531
EU BOM1	1.0p	8k2	680	33k	18k	100p	18p
US BOM1	1.5p						
EU BOM1A	1.0p	3k3	4k7	22k	8k2	68p	na
US BOM1A	1.5p						

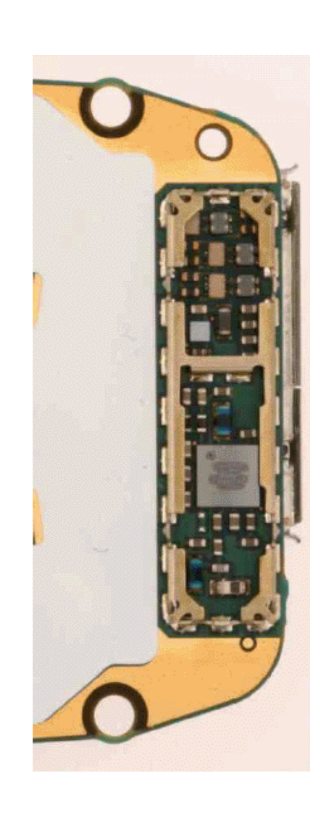
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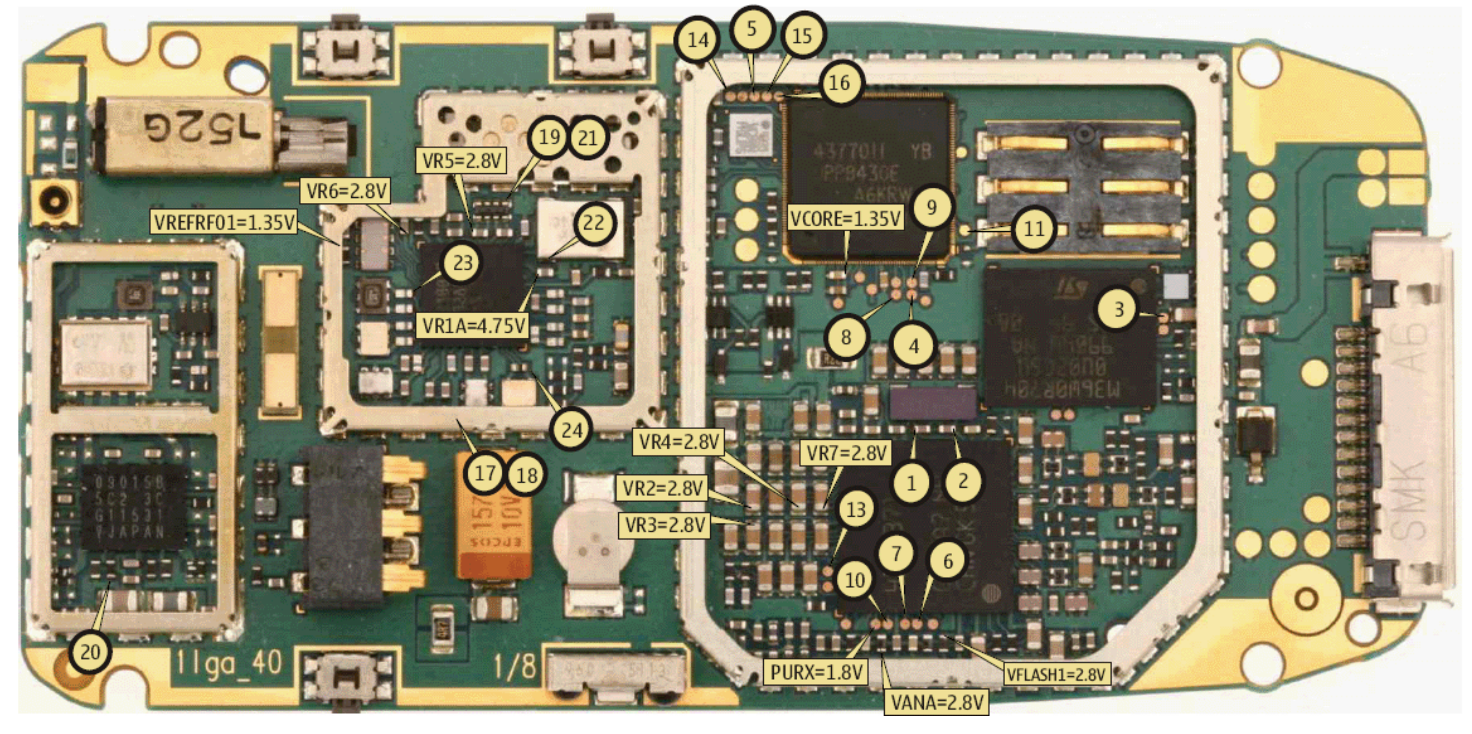


Signal overview





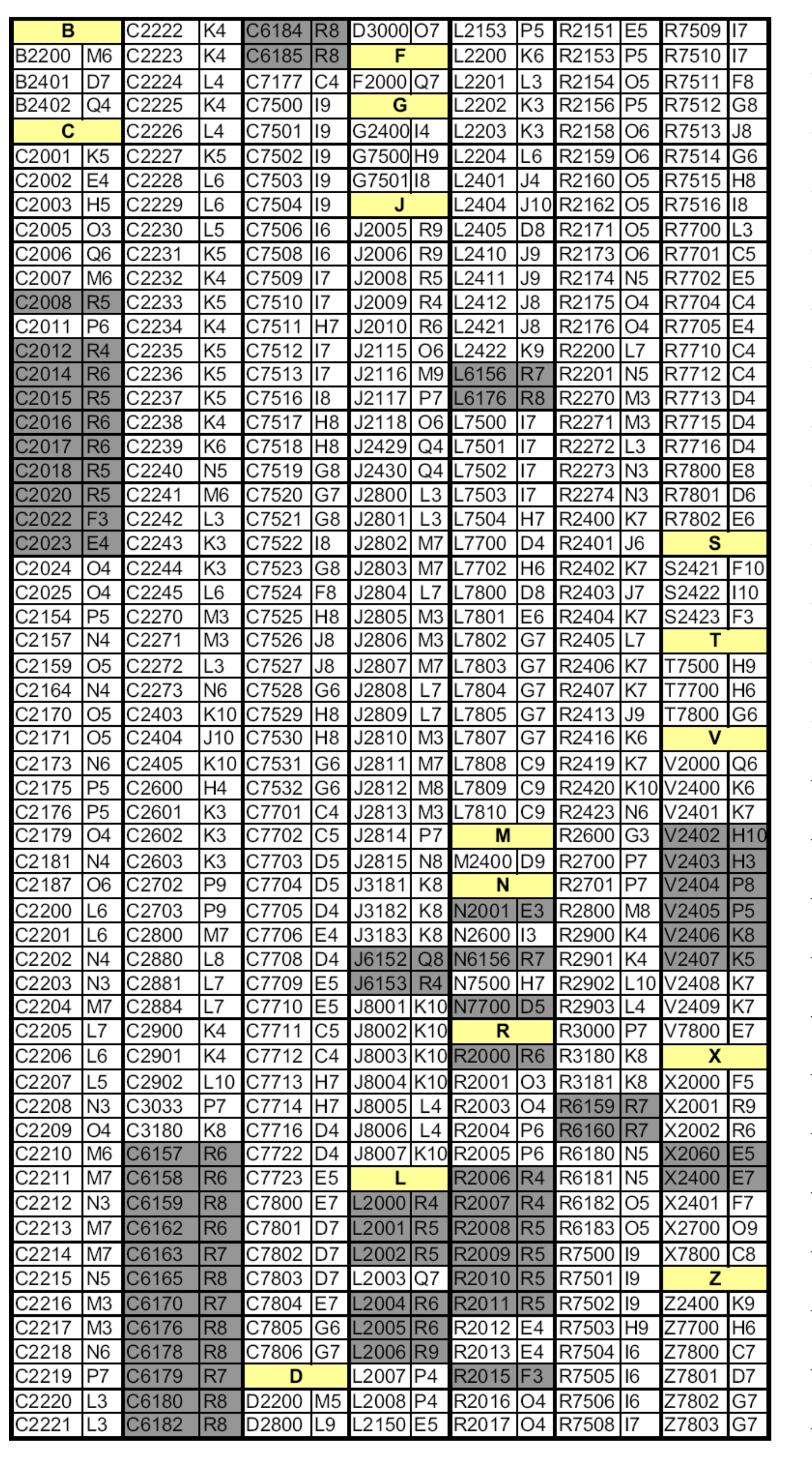




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Component finder



B		C2222	K4	C6184	R8	D3000	O7	L2153	P5	R2151	E5	R7509	I7
B2200	M6	C2223	K4	C6185	R8	F		L2200	K6	R2153	P5	R7510	I7
B2401	D7	C2224	L4	C7177	C4	F2000	Q7	L2201	L3	R2154	O5	R7511	F8
B2402	Q4	C2225	K4	C7500	I9	G		L2202	K3	R2156	P5	R7512	G8
C		C2226	L4	C7501	I9	G2400	I4	L2203	K3	R2158	O6	R7513	J8
C2001	K5	C2227	K5	C7502	I9	G7500	H9	L2204	L6	R2159	O6	R7514	G6
C2002	E4	C2228	L6	C7503	I9	G7501	I8	L2401	J4	R2160	O5	R7515	H8
C2003	H5	C2229	L6	C7504	I9	J		L2404	J10	R2162	O5	R7516	I8
C2005	O3	C2230	L5	C7506	I6	J2005	R9	L2405	D8	R2171	O5	R7700	L3
C2006	Q6	C2231	K5	C7508	I6	J2006	R9	L2410	J9	R2173	O6	R7701	C5
C2007	M6	C2232	K4	C7509	I7	J2008	R5	L2411	J9	R2174	N5	R7702	E5
C2008	R5	C2233	K5	C7510	I7	J2009	R4	L2412	J8	R2175	O4	R7704	C4
C2011	P6	C2234	K4	C7511	H7	J2010	R6	L2421	J8	R2176	O4	R7705	E4
C2012	R4	C2235	K5	C7512	I7	J2115	O6	L2422	K9	R2200	L7	R7710	C4
C2014	R6	C2236	K5	C7513	I7	J2116	M9	L6156	R7	R2201	N5	R7712	C4
C2015	R5	C2237	K5	C7516	I8	J2117	P7	L6176	R8	R2270	M3	R7713	D4
C2016	R6	C2238	K4	C7517	H8	J2118	O6	L7500	I7	R2271	M3	R7715	D4
C2017	R6	C2239	K6	C7518	H8	J2429	Q4	L7501	I7	R2272	L3	R7716	D4
C2018	R5	C2240	N5	C7519	G8	J2430	Q4	L7502	I7	R2273	N3	R7800	E8
C2020	R5	C2241	M6	C7520	G7	J2800	L3	L7503	I7	R2274	N3	R7801	D6
C2022	F3	C2242	L3	C7521	G8	J2801	L3	L7504	H7	R2400	K7	R7802	E6
C2023	E4	C2243	K3	C7522	I8	J2802	M7	L7700	D4	R2401	J6	S	
C2024	O4	C2244	K3	C7523	G8	J2803	M7	L7702	H6	R2402	K7	S2421	F10
C2025	O4	C2245	L6	C7524	F8	J2804	L7	L7800	D8	R2403	J7	S2422	I10
C2154	P5	C2270	M3	C7525	H8	J2805	M3	L7801	E6	R2404	K7	S2423	F3
C2157	N4	C2271	M3	C7526	J8	J2806	M3	L7802	G7	R2405	L7	T	
C2159	O5	C2272	L3	C7527	J8	J2807	M7	L7803	G7	R2406	K7	T7500	H9
C2164	N4	C2273	N6	C7528	G6	J2808	L7	L7804	G7	R2407	K7	T7700	H6
C2170	O5	C2403	K10	C7529	H8	J2809	L7	L7805	G7	R2413	J9	T7800	G6
C2171	O5	C2404	J10	C7530	H8	J2810	M3	L7807	G7	R2416	K6	V	
C2173	N6	C2405	K10	C7531	G6	J2811	M7	L7808	C9	R2419	K7	V2000	Q6
C2175	P5	C2600	H4	C7532	G6	J2812	M8	L7809	C9	R2420	K10	V2400	K6
C2176	P5	C2601	K3	C7701	C4	J2813	M3	L7810	C9	R2423	N6	V2401	K7
C2179	O4	C2602	K3	C7702	C5	J2814	P7	M		R2600	G3	V2402	H10
C2181	N4	C2603	K3	C7703	D5	J2815	N8	M2400	D9	R2700	P7	V2403	H3
C2187	O6	C2702	P9	C7704	D5	J3181	K8	N		R2701	P7	V2404	P8
C2200	L6	C2703	P9	C7705	D4	J3182	K8	N2001	E3	R2800	M8	V2405	P5
C2201	L6	C2800	M7	C7706	E4	J3183	K8	N2600	I3	R2900	K4	V2406	K8
C2202	N4	C2880	L8	C7708	D4	J6152	Q8	N6156	R7	R2901	K4	V2407	K5
C2203	N3	C2881	L7	C7709	E5	J6153	R4	N7500	H7	R2902	L10	V2408	K7
C2204	M7	C2884	L7	C7710	E5	J8001	K10	N7700	D5	R2903	L4	V2409	K7
C2205	L7	C2900	K4	C7711	C5	J8002	K10	R		R3000	P7	V7800	E7
C2206	L6	C2901	K4	C7712	C4	J8003	K10	R2000	R6	R3180	K8	X	
C2207	L5	C2902	L10	C7713	H7	J8004	K10	R2001	O3	R3181	K8	X2000	F5
C2208	N3	C3033	P7	C7714	H7	J8005	L4	R2003	O4	R6159	R7	X2001	R9
C2209	O4	C3180	K8	C7716	D4	J8006	L4	R2004	P6	R6160	R7	X2002	R6
C2210	M6	C6157	R6	C7722	D4	J8007	K10	R2005	P6	R6180	N5	X2060	E5
C2211	M7	C6158	R6	C7723	E5	L		R2006	R4	R6181	N5	X2400	E7
C2212	N3	C6159	R8	C7800	E7	L2000	R4	R2007	R4	R6182	O5	X2401	F7
C2213	M7	C6162	R6	C7801	D7	L2001	R5	R2008	R5	R6183	O5	X2700	O9
C2214	M7	C6163	R7	C7802	D7	L2002	R5	R2009	R5	R7500	I9	X7800	C8
C2215	N5	C6165	R8	C7803	D7	L2003	Q7	R2010	R5	R7501	I9	Z	
C2216	M3	C6170	R7	C7804	E7	L2004	R6	R2011	R5	R7502	I9	Z2400	K9
C2217	M3	C6176	R8	C7805	G6	L2005	R6	R2012	E4	R7503	H9	Z7700	H6
C2218	N6	C6178	R8	C7806	G7	L2006	R9	R2013	E4	R7504	I6	Z7800	C7
C2219	P7	C6179	R7	D		L2007	P4	R2015	F3	R7505	I6	Z7801	D7
C2220	L3	C6180	R8	D2200	M5	L2008	P4	R2016	O4	R7506	I6	Z7802	G7
C2221	L3	C6182	R8	D2800	L9	L2150	E5	R2017	O4	R7508	I7	Z7803	G7

